

**DETAILED SYLLABUS FOR THE POST OF
HIGHER SECONDARY SCHOOL TEACHER – GEOGRAPHY
IN KERALA HIGHER SECONDARY EDUCATION**

(TOTAL MARKS - 100)

PART I : GEOGRAPHY (70 Marks)

Module 1: CONCEPTS AND TRENDS IN GEOGRAPHY (8 Marks)

Nature and scope of Geography - History of development of Geographic Thoughts – Contributions of Greek, Roman, Arab, Indian, French, American, German and British Geographers – Dualism and dichotomies – Recent trends in geography – Approaches in Geography – Positivism, Pragmatism, Functionalism, Existentialism, Idealism, Marxism, Radicalism, Behaviouralism and Humanism – Welfare Geography – Quantitative Revolution - Laws, Theories and models in Geography, Spatial analysis, Locational analysis, Systems approach - Inductive, Deductive approaches, reasoning, Multi disciplinary approach, Welfare Geography, Human Ecology, Geography of Gender, Time and space, Postmodernism and Geography – Paradigm shift in Geography

Module 2: GEOMORPHOLOGY (8 Marks)

History of geomorphic thought- Origin of the earth - Isostasy – Continental drift and plate tectonics - Endogenism and exogenism – Earthquakes and volcanoes - Weathering and Mass wasting – Soils - Mountain building - Geomorphic processes and forms - Agents of Erosion and deposition – Land form and slope evolution theories – Morphogenetic regions and climatic geomorphology – Applied geomorphology

Module 3: CLIMATOLOGY (8 Marks)

Composition and Structure of the Atmosphere – Insolation – Heat Budget of the Earth – Temperature Inversion - Pressure belts- Atmospheric Stability and Instability - General Circulation of the Atmosphere – Meridional circulation – Winds – Jet Streams – Atmospheric Moisture – Humidity – forms of condensation – Precipitation - Tropical and Temperate Weather Systems – Air Masses and Fronts – Temperate Cyclones – Tropical Cyclones – Tornadoes and waterspouts - Thunderstorms – Monsoons - Climatic Classifications of Koeppen, Trewartha and Thornthwaite - Ocean – Atmosphere Interaction – El-Nino - and Southern Oscillations – La Nina - Climate Changes – Evidences, Past and Present – Possible Causes – Ozone Depletion – Global Warming and its Impacts- Applied Climatology – Climate and Agriculture – Weather Relations of crops – Weather and Diseases

Module 4: ENVIRONMENTAL GEOGRAPHY (7 Marks)

Ecosystem – structure, classification, biomes, Nutrient cycle. Natural disruptions of the ecosystem - Biodiversity, Natural hazards – Floods, Drought - Man’s modification of the Biosphere – Man’s impact on land, water and air - Environmental problems – Urban environment and pollution - Emerging environmental issues - Eco-crisis – Environmental management and planning - Environmental quality - Environmental law and protection – Environmental impact assessment – Environmental movements

Module 5: URBAN GEOGRAPHY (8 Marks)

Origin and Evolution of Urban Centres -Location and Siting of Urban Centres - Classification of Urban Centres - Different Approaches to the Study of Urban Geography – Factors associated with the growth of Cities - Classification of Urban Centres on the basis of a)Size, b)Function – Rank-Size Rule – Primate city - Harris and Nelson’s Scheme of Classification – Classification of Indian Cities by Ashok Mitra - Urban Centers – Their Spatial and Functional Relationships – Central Place Theory – Urban Morphology – Land Use Models – Theories of Burgess, Harris and Hoyt – Central Business District and its Characteristics – Morphology of Indian Cities – Urban Housing – Urban Housing Policies and Programmes in India - Urban Slums – Urban Fringe – Its Characteristics and Development - Salient Features of the Processes of Urbanisation in India and Kerala– Problems and Prospects.

Module 6: ECONOMIC GEOGRAPHY (8 Marks)

Resource and Economic Development - A Global Perspective - Classification of Resources according to Distribution, Utilisation and Potentials - Agriculture Location Theories - Von Thunen's Agricultural Location Model - Sinclair's Theory - Oloff Jonasson's Theory - Whittlesay's Classification – Crop combination, cropping pattern, crop diversification, cropping intensity, agricultural efficiency - Industrial Location Theories - Least Cost Approach - Webers Theory - Maximum Revenue Approach - Toad Palender, Edgar Hoover, August Losch, David M Smith, Harold Hotelling - Behavioural Approach - Allan Pred, Product Life Cyle - Structural Approach - World Trade - Laftla - EEF - EFTA - World's Major Trade Zones - Western Europe, North America, Latin America, Australia, Russia and Eastern Europe, Asia.

Module 7: ADVANCED CARTOGRAPHY (7 Marks)

Map functions and types – Geodesy - Directions and their functions – Map projections, scale and co-ordinate systems – Cartographic data and processing – sources of image processing – digital database – cartographic database management - Phases of cartographic processes – Map compilation – Graphic and conceptual process and tools - Lettering and Typography - topographic data mapping and charting organizations - Cartographical data analysis – Digital cartography

Module 8. REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEM
(8 Marks)

EMR and remote sensing; Spectral regions, interaction of EMRwith atmosphere and earth surface features - Types of Remote sensing, platforms, orbit - Ideal & real remote sensing – Aerial Photography – basic principles of Photogrammetry - satellite remote sensing – types of satellites - Remote sensors - ; types of sensor system, scanning and orbiting mechanism, Resolution- spatial, Spectral, radiometric and temporal resolution. Resolution aspects of LANDSAT, SPOT, IRS and IKONOS satellites - Satellite photographic systems; Thermal infrared remote sensing, microwave remote sensing, Hyper spectral remote sensing - Digital image processing – Indices -Vegetation Index, NDVI, BUI - Development of Remote sensing in India- Developments - Satellite programmes – Applications of remote sensing - GIS – Components - GIS : Definition, Components, Data in GIS - Spatial Data, Attribute Data - Data input and editing - Error Rectification, Transformation and Generalisation - Spatial Data Models - Spatial Data Management : Database Management System – RDBMS – Query Models – Reclassification – Buffer Analysis – Neighborhood functions- Overlay Analysis and Boolean Operators - Spatial Analysis : Spatial Interpolation and surface analysis - Modeling Surfaces - Trend surfaces and Digital Elevation Models. - Modeling Networks : Network analysis - Web GIS and Mobile GIS -

Open source software QGIS-, ILWIS, SAGA GIS, Geo Server, Open data sources for GIS analysis – Open Street Map, USGS Earth Explorer, NASA’s Socioeconomic Data and Applications Center (SEDAC), United Nations Environmental Data Explorer, FAO Geo Network. Location Allocation and Facility Management using GIS.

Module 9: GEOGRAPHY OF INDIA WITH SPECIAL REFERENCE TO KERALA

(8 Marks)

Location – Physiography – Stratigraphy – Climate – Drainage – Soils – Natural Vegetation – Land utilisation – Irrigation – Agriculture – Mineral and Power Resources - Industries – Transport and Trade – Population - Geography of Kerala – Location – Physiography and drainage – Climate and natural vegetation – Soils – Minerals - Agriculture – Fisheries – Industries – Irrigation and Power – Transport and Communication - Population – Ecology and environment

PART II TEACHING APTITUDE

(5 Marks)

- Teaching: Nature, objectives, characteristics and basic requirements;
- Learner's characteristics;
- Factors affecting teaching;
- Methods of teaching;
- Teaching aids;
- Evaluation systems.

PART III RESEARCH METHODOLOGY

(5 Marks)

- Research: Meaning, Characteristics and types;
- Steps of research;
- Methods of research;
- Research Ethics;
- Paper, article, workshop, seminar, conference and symposium;
- Thesis writing: its characteristics and format.

PART IV (10 Marks)

Salient Features of Indian Constitution

Salient features of the Constitution - Preamble- Its significance and its place in the interpretation of the Constitution.

Fundamental Rights - Directive Principles of State Policy - Relation between Fundamental Rights and Directive Principles - Fundamental Duties.

Executive - Legislature - Judiciary - Both at Union and State Level. - Other Constitutional Authorities.

Centre-State Relations - Legislative - Administrative and Financial.

Services under the Union and the States.

Emergency Provisions.

Amendment Provisions of the Constitution.

Other Constitution Authorities:- Election Commission of India, Human Rights Commission UPSC, State Public Service Commissions, Information Commission, etc.

Social Welfare Legislations and Programmes

Social Service Legislations like Right to Information Act, Prevention of atrocities against Women & Children, Food Security Act, Environmental Acts etc. and Social Welfare Programmes like Employment Guarantee Programme, Organ and Blood Donation etc.

PART V : GENERAL KNOWLEDGE, CURRENT AFFAIRS AND RENAISSANCE IN KERALA AND FREEDOM MOVEMENT (10 Marks)

Towards A New Society

Introduction to English education - various missionary organisations and their functioning- founding of educational institutions, factories, printing press – CMS Press etc.

Efforts To Reform The Society

(A) Socio-Religious reform Movements

SNDP Yogam, Nair Service Society, Yogakshema Sabha, Sadhu Jana Paripalana Sangham, Vaala Samudaya Parishkarani Sabha, Samathwa Samajam, Islam Dharma Paripalana Sangham, Prathyaksha Raksha Daiva Sabha, Sahodara Prasthanam etc.

(B) Struggles and Social Revolts

Upper cloth revolts. Channar agitation, Vaikom Sathyagraha, Guruvayoor Sathyagraha, Paliyam Sathyagraha. Kuttamkulam Sathyagraha, Temple Entry Proclamation, Temple Entry Act .Malyalee Memorial, Ezhava Memorial etc.

Malabar riots, Civil Disobedience Movement, Abstention movement etc.

Role Of Press In Renaissance

Malayalee, Swadeshabhimani, Vivekodayam, Mithavadi, Swaraj, Malayala Manorama, Bhashaposhini, Mathnubhoomi, Kerala Kaumudi, Samadarsi, Kesari, AI-Ameen, Prabhatam, Yukthivadi, Deepika – Nasrani Deepika, etc

Awakening Through Literature

Novel, Drama, Poetry, *Purogamana Sahithya Prasthanam, Nataka Prashtanam*, Library movement etc

Women And Social Change

Parvathi Nenmenimangalam, Arya Pallam, A V Kuttimalu Amma, Lalitha Prabhu. Akkamma Cherian, Anna Chandi, Lalithambika Antharjanam and others

Leaders Of Renaissance

Thycaud Ayya Vaikundar, Sree Narayana Guru, Ayyan Kali. Chattampi Swamikal, Brahmananda Sivayogi, Vagbhadananda, Poikayil Yohannan (Kumara Guru) Dr Palpu, Palakkunnath Abraham Malpan, Mampuram Thangal, Sahodaran Ayyappan, Pandit K P Karuppan, Pampadi John Joseph, Mannathu Padmanabhan, V T Bhattathirippad, Vakkom Abdul Khadar Maulavi, Makthi Thangal, Blessed Elias Kuriakose Chaavra, Barrister G P Pillai, TK Madhavan, Moorkoth Kumaran, C. Krishnan, K P Kesava Menon, Dr. Ayyathan Gopalan, C V Kunjuraman, Kuroor Neelakantan Namboothiripad, Velukkutty Arayan, K P Vellon, P K Chathan Master, K Kelappan, P. Krishna Pillai, A K Gopalan, T R Krishnaswami Iyer, C Kesavan. Swami Ananda Theerthan, M C Joseph, Kuttippuzha Krishnapillai, Nidheerikkal Manikathanar and others

Literary Figures

Kodungallur Kunhikkuttan Thampuran, KeralaVarma Valiyakoyi Thampuran, Kandathil Varghese Mappila. Kumaran Asan, Vallathol Narayana Menon, Ulloor S Parameswara Iyer, G Sankara Kurup, Changampuzha Krishna Pillai, Chandu Menon, Vaikom Muhammad Basheer. Kesav Dev, Thakazhi Sivasankara Pillai, Ponkunnam Varky, S K Pottakkad and others

GENERAL KNOWLEDGE, CURRENT AFFAIRS

NOTE: - It may be noted that apart from the topics detailed above, questions from other topics prescribed for the educational qualification of the post may also appear in the question paper. There is no undertaking that all the topics above may be covered in the question paper